

# **TRANSPORTATION AND TRAFFIC DIGEST**



**CITY OF SUNNYVALE  
DEPARTMENT OF PUBLIC WORKS  
DIVISION OF TRANSPORTATION AND TRAFFIC  
JANUARY, 2004**



## **WHO IS TRANSPORTATION IN SUNNYVALE?**

Transportation and traffic issues by nature are far-reaching and complex. A seemingly simple change to a roadway can require the involvement of officials from the realms of Traffic Engineering, Public Works Field Services, Capital Project Administration, Planning, and Public Safety. A host of other agencies operate within the City's boundaries or influence the City's transportation system including the Valley Transportation Authority, the California Department of Transportation, CalTrain, the County of Santa Clara, and the California Highway Patrol. In Sunnyvale, the Transportation and Traffic Division of the Department of Public Works is a primary point of contact for transportation issues and needs. The Transportation and Traffic Division partners with a variety of divisions and departments which are listed at the back of this brochure.

## TRANSPORTATION CHARACTERISTICS

The City of Sunnyvale is served by a well-developed transportation system. Approximately 298 miles of **roadway** includes major freeways, expressways, arterial streets, neighborhood collectors, and local neighborhood streets.

The Valley Transportation Authority and the Peninsula Corridor Joint Powers Board (CalTrain) are the major **transit service** providers, augmented by ACE shuttles and other public and private shuttles. Paratransit service is by the Valley Transportation Authority as well.



The City's **bicycle and pedestrian systems** are evolving. A long-range bicycle improvement program has resulted in a major increase in new bikeways since 2000, with approximately 34 miles of bike lanes and paths now available. Sidewalks are present in most residential and commercial areas and increasingly in the industrial neighborhoods.

**Traffic** flows are subject to economic cycles, weather, and a number of other factors. Traffic declined about 6% on average in 2002 but was stabilizing in 2003. Traffic collision rates have declined slightly over the same period. Bus and light rail transit service declined from 2001 to 2003 due to economy-related declines in revenue and ridership, with the number



of routes reduced from 22 to 19. Boardings in Sunnyvale declined by 7% in 2002. CalTrain commuter rail is on the incline, however, with the number of trains and boardings rising since 2001.

## **TRAFFIC SIGNAL OPERATIONS AND MAINTENANCE**



The City operates and maintains 136 traffic signals, eight signal interconnect systems, and three communications systems. Sunnyvale interfaces with the California Department of Transportation, the Cities of Cupertino and Santa Clara, and the Valley Transportation Authority on traffic signal operations. Some facts about signal operations:

- In 2003, one hundred twenty seven traffic signal operational reviews and optimizations were performed.
- The City sets a performance standard of 90%

signal trouble call response within 1 hour. In 2003, 93% of calls were responded to in one hour or less.

## **INTERGOVERNMENTAL COORDINATION**

The City participates in a number of important intergovernmental activities. For example, in 2003, thirteen Council intergovernmental relations assignments included Mayor Julia Miller's prominent role in the Bay Area Air Quality Management District, Council Member Manual Valerio's chairmanship of the Valley Transportation Authority Board of Directors and participation on the CalTrain Board, and Vice-Mayor Tim Risch's service as chair of the Valley Transportation Authority Policy Advisory Committee. Staff served on the VTA Capital Improvement Program Sub-Committee, Comprehensive County Expressway Planning Study Technical Working Group; the VTA LOS/Modeling Committee; the VTA Best Practices Task Force; the County Traffic Safe Communities Network Advisory Committee; Santa Clara County Resource Team for Air Quality; and the VTA Community Oriented Design Enhancements Committee.



Intergovernmental coordination is essential for asserting the City's position on regional issues; participating in major transportation funding efforts; and providing local leadership at the regional level.

Recent highlights of intergovernmental coordination include:

- ✓ Council endorsement of a Comprehensive Countywide Expressway Study

- ✓ Initiation of a Highway 237 Corridor Study in partnership with the Valley Transportation Authority



- ✓ Coordinating Local Streets and Roads needs with the Regional Transportation Plan

- ✓ Monitoring of the VTA

financial situation

- ✓ Selection to participate in the Metropolitan Transportation Commission's initial SAFETYTAP Bicycle and Pedestrian Safety Program.

The City has a long record of success in securing outside **grant funding** for transportation projects. For example, in 2003 a total of \$764,800 was secured from State and regional sources, including the 5<sup>th</sup> highest award statewide for California Energy Commission signal battery back up system grants. Applications for TFCA 60%, MTC Transportation for Livable Communities, CalTrans Bicycle Transportation Account, Safe Routes to School, and SCVWD Trails, Parks and Open Space were submitted.

## ROADWAY SAFETY AND DESIGN

One of the Transportation and Traffic Division's primary outcomes is to contribute to roadway safety. This is achieved through many activities, of which design activities and service requests are a chief component.

- The Division processes approximately 300 **service requests** for signs and roadway markings a year. Recently Transportation and Traffic and the Field Services Division worked together to install the first high visibility yellow/green school zone signs in the City, complete a second phase of a special speeding reduction sign program, and implement roadway geometric modifications at select locations.



- **Traffic collision reports** in FY 01-02 citing traffic signals and signs as a primary collision factor decreased by 48% over a comparable 6 month period in FY 01/02. The overall collision rate per million vehicle miles dropped from 2.15 to 2.05. The City was a leader in the countywide stop red light running campaign spearheaded by the



County Department of Health Services. Additionally, the Transportation and Traffic Division services locations with its speed radar trailer. In 2003, 129 locations were served.

- Sunnyvale is a major participant in a County Traffic Safe Communities initiative. The City's focus on **red light running prevention** were showcased by Mayor Julia Miller at a County Traffic Safe Communities Network press conference in Spring, 2003.



## TRANSPORTATION IMPACTS OF LAND DEVELOPMENT



The Transportation and Traffic Division plays a critical role in land development through the assessment of traffic impacts, environmental review, site design, and construction permitting and coordination. Recent major transportation planning efforts include the Downtown Urban Design Study, two transit oriented developments in the Fair Oaks/Tasman area, a use change at the Hewlett Packard campus, and the Moffett Park Specific Plan. The Division works cooperatively with the Planning Department on a number of other issues including downtown area guide sign and streetscape standards.

## BICYCLES AND PEDESTRIANS

- The Transportation and Traffic Division supports the City's **Bicycle and Pedestrian Advisory Committee**. A range of BPAC activities are supported, including review of City operations, bicycle and pedestrian improvement recommendations, special studies, bike map development, and promotional efforts. Some examples of BPAC activities include development of a construction zone traffic safety Standard Operating Procedure, review of bicycle and pedestrian elements of the Municipal Code, Bike to Work Day, Downtown construction traffic control review, and review of several bike and pedestrian capital projects.
- The City is a participant in the Metropolitan Transportation Commission's initial **SAFETYTAP** Bicycle and Pedestrian Safety Program. This program provides expert evaluation and planning for bicycling and pedestrian safety.





- The City has a well-developed long range plan and capital program for **bicycle and pedestrian improvements**. In 2003 five new bikeway improvement projects were completed, adding over 11 centerline miles to the City's bike lane network. Two major sidewalk projects complete comprehensive sidewalk connections to the Tasman light rail line. The Division also successfully installed audible pedestrian signals at CalTrans intersections on El Camino Real.



- A major BPAC study completed in 2003 was an updating of the Municipal Code with respect to bicycles and pedestrians. A broad range of issues was debated with the Bicycle and Pedestrian Advisory Committee, resulting in 30 changes to the Municipal Code. The BPAC typically recommends a number of major study efforts to the City Council each year.
- **Countdown pedestrian signals** have passed trials and are being regularly implemented in Sunnyvale. Technical performance and field observation was conducted in 2003, as well as limited outreach to solicit public feedback. Results were positive, and the Division will replace the previous pedestrian signal standard with countdown signals.

## NEIGHBORHOOD TRAFFIC CALMING

"Traffic calming" is the moniker for a range of roadway engineering activities intending to slow traffic in residential neighborhoods and appropriately direct traffic. City policy is administered by the Transportation and Traffic Division. Short term response, special studies, and capital improvements are conducted or overseen by the Division staff.

- **Traffic calming studies** involve data collection, resident outreach, phased response, and policy and improvement recommendations. The City responds to several inquiries each year, and conducts formal activities on in a number of neighborhoods. For example, in 2003 studies were completed for eight locations, including Sydney Avenue, Quail Avenue, Norman Drive and Swallow Drive. The first "Phase II" physical improvements were constructed in the City on Canary Drive.
- A booklet for citizens is available presenting information on traffic calming processes and procedures





- **Special Speed Sign Program** – Neighborhood collector streets are targeted for special sign treatments to alert drivers to follow the speed limit. Approximately 10 streets each year receive these placements.
- **Radar Trailer** – In 2003 One hundred and twenty nine locations were serviced by the Division of Transportation and Traffic radar trailer, which was augmented by additional service by the Department of Public Safety's portable radar units and truck mounted units on Department of Public Works utility vehicles.

## CAPITAL IMPROVEMENTS

Capital improvements involving the Transportation and Traffic Division are varied and numerous. These range from roadway, to bridge, traffic signal, bike, pedestrian, transit, and special projects. A sampling of projects includes:

- A significant number of **traffic signal infrastructure improvements**. In 2003, new or replacement signals were designed and/or constructed at 13 locations, including decorative heritage designs in the downtown. The first countdown pedestrian signals and signal battery backup systems were installed. The Division established and implemented a standard for video signal detection.
- A Metropolitan Transportation Commission Transportation Engineering Technical Assistance Program grant for re-timing of the Mathilda/237 interchange signals.
- Previously mentioned were the completion of bicycle and pedestrian improvements. In 2003, five bikeway improvement projects were completed, adding over 11 centerline miles to the City's bike lane network. Two major sidewalk projects initiated construction which will complete comprehensive sidewalk connections to the Tasman light rail line. The Division also successfully had audible pedestrian signals installed at CalTrans intersections on El Camino Real.
- A replacement **traffic signal interconnect and coordination** system on Mathilda Avenue, new interconnect on Wolfe Road and the introduction of centralized traffic management to improve travel time reliability are other recent projects commissioned to the Division.







Other **major capital improvement projects** which the Division has moved forward in recent years include the Mathilda CalTrain Overpass Improvement Project, the Borregas Bicycle/Pedestrian Bridges project, and the Calabazas Creek Trail.

## SERVICE DELIVERY IMPROVEMENTS

- **Electronic databases** improve the Division staff's accessibility to information, improve operating procedures, and reduce hard file storage requirements. These include:
  - Signal drawings
  - Speed surveys
  - Traffic volume counts
  - Stop warrant studies
  - Time and delay run data
  - Level of service calculations
  - Community condition indicators
  - Radar speed surveys
  - Collision data



- The Division is implementing **centralized traffic signal system control** at the Division office. Four new systems in the field will integrate with a central Traffic Management Center (in addition to several already in place). The TMC improves signal system repair and operation efficiency.
- Electronic Signal Troublespot and Radar Trailer Deployment systems improve the efficiency of response and scheduling, as well as tracking of productivity.
- The Division works with the Department of Public Safety to certify Transportation and Traffic staff to operate fire rigs, in order to eliminate the need for DPS staff to participate in EMTRAC signal priority system repairs and tuning. This saves approximately 4+ hours of DPS staff time per service request.

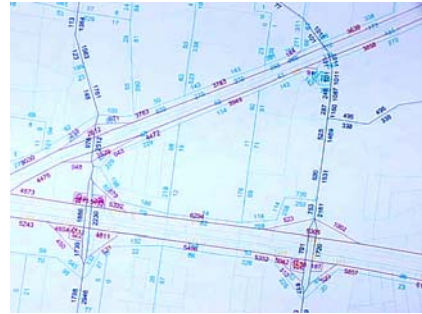


- The Division works with the Field Services Division to eliminate overlapping responses for loop detector marking. Previously, crews from each Division would need to respond to first locate and then mark detectors. By shifting responsibility for marking to the Transportation and Traffic Division, staff saves 50% of the required response time.
- Revenue/mitigation enhancement – As mentioned above, the Division's grant writing activities and development mitigation enhance revenue to the City and enable community enhancement services such as new bikeways, new

sidewalks, traffic calming, increased traffic signal efficiency, improved roadway designs and speed control.

## LONG RANGE PLANNING

The Transportation and Traffic Division is responsible for long range **transportation planning** for the City. The Land Use and Transportation Element is the guiding policy document for transportation in the City. Other efforts include the City's Transportation Strategic Program, which supports a transportation impact fee on new development and funding for long range transportation improvements.



The City also recently partnered with the Valley Transportation Authority to initiate **freeway interchange planning studies**, at Route 237/Mathilda and Route 85/Fremont. Other long range transportation plans completed by the Division include the Bicycle Opportunities Study, the Bicycle Capital Improvement Program, and the Sunnyvale Transit Improvement Study. The Division also supports Community Development Department efforts for land use planning, including the Moffett Park Specific Plan, the Fair Oaks ITR General Plan Amendment, and the Downtown Specific Plan.

## SCHOOL STUDIES



The Division regularly coordinates with local schools on traffic issues. In 2003 staff participated in completion of a site circulation study by the Department of Public Safety of the Bishop School, in cooperation with the school administration. The study resulted in changes to the parking configuration to improve drop off and pick up. Other school sites recently analyzed in depth include Columbia and Cupertino Middle Schools and the Stratford School on Pastoria Avenue.

**PARTNERS IN TRANSPORTATION SERVICES AT THE CITY OF SUNNYVALE INCLUDE:**

**DEPARTMENT OF PUBLIC WORKS**

**DIVISION OF TRANSPORTATION AND TRAFFIC**

(Traffic signals, roadway design, transportation planning, intergovernmental liaison, traffic studies, traffic calming, bicycle and pedestrian issues)

Jack Witthaus, Transportation and Traffic Manager

(408) 730-7330

[jwitthaus@ci.sunnyvale.ca.us](mailto:jwitthaus@ci.sunnyvale.ca.us)

**FIELD SERVICES DIVISION**

(Signs and markings, pavement maintenance, streetlights, sidewalks)

Jim Craig, Superintendent

(408) 730-7510

[pubworks@ci.sunnyvale.ca.us](mailto:pubworks@ci.sunnyvale.ca.us)

**ENGINEERING SERVICES DIVISION**

(Capital project design and construction, utility coordination, construction permits)

Barbara Keegan, Assistant Director of Public Works

(408) 730-7415

[pubworks@ci.sunnyvale.ca.us](mailto:pubworks@ci.sunnyvale.ca.us)

**TREES AND LANDSCAPE DIVISION**

(Sidewalk and concrete repair)

Doug Mello, Superintendent

(408) 730-7505

[pubworks@ci.sunnyvale.ca.us](mailto:pubworks@ci.sunnyvale.ca.us)

**DEPARTMENT OF PUBLIC SAFETY**

**TRAFFIC UNIT**

(Traffic law enforcement, collision reports)

Captain Mark Stivers

(408) 730-7109

[pubsfty@ci.sunnyvale.ca.us](mailto:pubsfty@ci.sunnyvale.ca.us)

**CRIME PREVENTION UNIT**

(Crossing guards, school safety education, bicycle patrol, community outreach)

Lieutenant Marty Dale

(408) 730-7140

[pubsfty@ci.sunnyvale.ca.us](mailto:pubsfty@ci.sunnyvale.ca.us)

**DEPARTMENT OF COMMUNITY DEVELOPMENT**

**PLANNING DIVISION**

(Long range planning, environmental review of land development)

Trudi Ryan, Planning Officer

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